

# The Usage of LMS among Undergraduate Students

Kung Siew Min

School of Technology Management and Logistics  
College of Business, Universiti Utara Malaysia  
Sintok, Kedah, Malaysia

Fadhilah Mat Yamin

School of Technology Management and Logistics  
College of Business, Universiti Utara Malaysia  
Sintok, Kedah, Malaysia  
Email: fmy@uum.edu.my

Wan Hussain Wan Ishak

School of Computing  
College of Arts and Sciences, Universiti Utara Malaysia  
Sintok, Kedah, Malaysia  
Email: hussain@uum.edu.my

**Abstract**—Learning Management System (LMS) is one of the knowledge management tools that support knowledge sharing and communication among its participants. LMS is one of the popular applications among institution of higher learning in Malaysia. This study empirically investigates the activities that students mostly participated while they are login to LMS. This study also investigates the impact of LMS on teaching and learning. Fifty respondents involved in this short survey. The findings are significant to LMS designers, providers and institution of higher learning that subscribe to the LMS. These findings will give some insight on how the students utilize LMS.

**Keywords**—Learning Management System; E-Learning; Online Learning; User Satisfaction

## I. INTRODUCTION

Information and communication technology (ICT) enable the participants particularly teachers and students to interact in digital environment. Teachers will prepare and provide content and learning materials. These materials can be made specialized to the learners' need [1]. The students or the learners will then interact with the course content. The interaction forms a knowledge sharing environment that extend the traditional teaching and learning environment.

Learning Management System (LMS) is one of the Knowledge Management tools that support e-learning. LMS can be used to organize and provide access to online learning services where students, teachers and administrators are the main user [2]. Through LMS, users can plan, implement and assess specific learning activities in e-learning environment [3]. Thus, there is a need to systematically measure the success and effectiveness of the LMS [2].

To date, many institutions of higher learning in Malaysia implement LMS to support their e-learning program. Open University Malaysia (OUM) for example has developed MyLMS since 2003 to support various e-learning activities. It is a comprehensive and flexible e-learning system allowing facilitators and learners to interact in a virtual environment. University Tenaga Nasional implement LMS called Learning

Cube that enable learners to provide members of their community with tools to implement, develop and share effectively the available technology to improve their intra and inter-organizations learning process. Universiti Utara Malaysia (UUM) implements LMS since the year 2000. The LMS known as LearningZone has various functionalities that support lecturers, students and administrators. Through LearningZone lecturers can setup an interactive course content, notes, create blog, forum, online quiz, assignment and etc.

This paper present descriptive analysis of the survey conducted among a group of UUM's students. The survey aim to identify the usage level and the impact of LearningZone towards the students' learning.

## II. LEARNING MANAGEMENT SYSTEM

LMS is a software application or web-based technology used to plan, implement and assess a specific learning process [3]. It can be used to support online teaching or supplement to face-to-face instruction [4]. Online teaching method is also referred to e-learning. Traditionally, learning occurs within physical boundaries such as a classroom, a school and field trips and various locations. In contrast, through e-learning, learning can happen anywhere and anytime without the limit of physical location [5].

The rapid penetration of LMS as key tools for e-learning occurs in a vacuum of solid research as to their effectiveness in increasing learning or even indication of best practices for technology implementation. Through LMS, the instructional content, progress tracking, and usage data can be easily managed and presented for maintenance and supervision purposes. It can be integrated into current classroom curriculum and related learning strategies to help carry the learner beyond the confines of the classroom.

Many higher education institutions have implemented a LMS to manage online learning and teaching. Institutions are increasingly exploring the potential use of e-learning technologies to cater the growing demands of flexible teaching

needs in distance education [6]. Universities in Malaysia have responded actively to this challenge guided by the government policies and strategies to enhance the use of ICT in the education [7].

LMS has also become a major component in Universiti Utara Malaysia e-learning programme. The LMS called LearningZone has been used to support the university teaching and learning, administrative and research activities. Both undergraduate and postgraduate students gain benefits towards the system.

### III. METHODOLOGY

The respondent of this study was a group of 150 final year students who enroll in project paper course. They were asked to answer questionnaire to indicate their perceptions towards LearningZone activities and its impact on their teaching and learning. A total of 80 questionnaires were returned but only 50 questionnaires were usable. The rest were discarded because of the invalid answers. The usable response rate was at 62.5%. A statistical analysis was performed using SPSS software.

### IV. FINDINGS

Overall 50 usable questionnaires have been received from the survey. The number of female responding to the questionnaire is slightly outnumbered male, with 64% (32 students) of the participants are female while male is only 36% (9 students) (Fig. 1). The participants are between 18 to 25 years old.

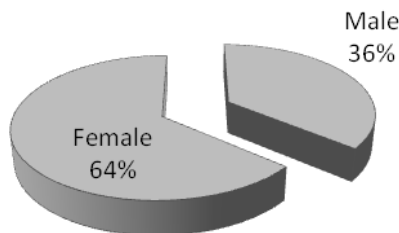


Figure 1: Gender of respondent

#### A. LearningZone Usage

Students were asked the frequency of using LearningZone based on 10 activities. It appear that students involve in all activities, but the frequencies are varies (Table I).

TABLE I. FREQUENCY OF LEARNINGZONE USAGE

Activities	Frequency*						
	D	S/TPW	W	M	OPQ/SM	OPY	N
View lecture notes	28%	40%	24%	6%	2%	0%	0%
View announcements	32%	32%	22%	10%	4%	0%	0%
Read message	24%	26%	24%	10%	4%	4%	8%
Send message	6%	16%	14%	16%	8%	12%	28%
Discussion with lecturer using Chat module	4%	8%	8%	10%	4%	10%	56%
Discussion with classmate using Chat module	2%	12%	12%	8%	2%	12%	52%
Download course documents	28%	40%	22%	4%	2%	2%	2%
View general resource	18%	26%	30%	14%	4%	2%	6%
View upcoming event or activities	18%	20%	26%	14%	4%	12%	6%
View profile of other participants	6%	16%	34%	10%	18%	14%	2%

\* D=Daily, S/TPW=Several/Time per Week, W=Weekly, M=Monthly, OPQ/SM= Once per quarter/Semester, OPY=Once per year, N=Never

#### B. Impact of LearningZone

The respondents indicate that LearningZone has an impact on the process of teaching and learning. Typically, it encourages information exchange and communication, promote active learning, and increase students' understanding. Table II shows the impact of LearningZone towards teaching and learning. Overall the mean is more than the average.

TABLE II. THE IMPACT OF LEARNINGZONE TOWARDS TEACHING AND LEARNING

Item	Mean (M)	Standard Deviation (SD)
The LearningZone can enhance exchange & communication between lecturer and students	3.820	0.8003
Compare to traditional learning, Learningzone makes me productive to my study	3.440	0.8122
It is easy for me to understand every activities provide in LearningZone	3.52	0.6465
Using LearningZone has enhance the knowledge & understanding I gain from lecturer	3.52	0.6465
The LearningZone allow me to provide feedback from lecturer	3.72	0.76
LearningZone is important elements of my course	3.840	0.7384

## V. DISCUSSION

Students recognize that LearningZone is a helpful medium for their learning. They have positive perception towards LearningZone as a medium of knowledge or information sharing and interacting with lecturer and other students. Therefore, they are satisfied with online lecture note posted on LearningZone. These aspects are inline with [8] that students prefer flexibility in accessing their lecture note, using ICT to communicate and enhance their learning. Apart of obtaining lecture notes, LearningZone also equipped with the assessment modules such as assignment submission and quiz. The finding shows that students are less satisfied with these modules. Therefore, these modules need to be studied and improved.

This study reveal that students predominantly using LearningZone to view lecture note, announcements, general resources, upcoming events or activities, view profile of other participants and download course documents. Students frequently download course documents and view lecture note in order to get the updated class material. These materials are important for their learning and increases efficiency by saving time and convenience to retrieved [9].

Students were also found subscribed a number of self regulated discussion group related to their coursework, the problem-based learning (PBL) and social activities. However, Chat modules are not well developed with more than 50% of students having problems with online chat features. Thus, discussion with lecturer and classmate is lacking by not possessing many features of standard Chat module.

The results also indicate that most students prefer to read rather than sending messaging and participate in discussion. Students like to think and reflecting to the materials and expecting to visit and spend more time on reading material as well as stay longer at outlines.

This study also showed that there was a strong relationship between the lecturers and students to access LearningZone. Findings from descriptive statistical show that 48% agree and 20% strongly agree that LearningZone can enhance the communication and information exchange between lecturer and students. LearningZone also allow lecturer to provide feedback so that easy for the student to comprehend every activities. Besides that, students were more satisfied with LearningZone compare to traditional learning. Students enrolled in online course were significantly more satisfied with the course rather than those who were thought traditionally. Students have sufficient awareness on the importance of the learning and having positive attitudes towards using learning. It also can influence students to initiate and motivate them to continue using the LearningZone.

## VI. CONCLUSION

This research is essential to understand the collaborative learning that can be achieve through rigorous interaction among students, provide anywhere, anytime interaction among the students community and remove the wall of classroom for

students as well as trainers through LMS. LMS provide modular and extensible system with adaptive and knowledge management abilities for students and lecturers.

LearningZone one of the LMS offers great opportunity to improve the teaching and learning process. Through the system lecturer can get a better understanding of their students by knowing what problems they may be facing, who can help them and how, when they are behind or ahead of their peers, and what roles can be assigned in discussion forums. So it can turn to a positive effect on students who can receive feedback tailored to their needs and problems. LMS also serve as one stop center for students to obtain a large number of resources online whenever they want and increases efficiency by saving time and convenience. This learning environment can get benefits from the integration of classroom and online delivery, students to pursue further knowledge thereby increase their learning outcomes.

## REFERENCES

- [1] D. Tavangarian, M.E. Leypold, K. Nölting, M. Röser, and D. & Voigt, "Is e-Learning the Solution for Individual Learning?", *Electronic Journal of e-Learning*, 2(2), pp. 273-280, 2004
- [2] S. Ozkan, R. Koseler, and N. Baykal, "Evaluating Learning Management Systems: Hexagonal E-learning Assessment Model (HELAM)", *Information System Journal*, 3(2), pp. 1-16, 2008
- [3] N. Aziah, and W. Marzuki, "Innovation for Better Teaching and Learning: Adopting the Learning Management System". *Malaysian Online Journal of Instructional Technology*, 2(2), pp. 27-40, 2005
- [4] K. Passerini, "Evaluating Learning Management System: Leveraging Learned Experience from Interactive Multimedia". *International Journal of Web-Based Learning and Teaching Technologies*, 1(1), pp. 1-27, 2006
- [5] P. Vincent, K. W. Lee, C. K. Tan, and M. Shukery, "E-learning Initiatives In E-Ducating Student Teachers", *GEMA Online Journal of Language Studies*, 5(2), pp. 15-27, 2005
- [6] D. Weaver, S. Christine, and S. N. Chenicheri, "Academic and Student Use of a Learning Management System: Implications for quality", *Australasian Journal of Educational Technology*, 24(1), pp. 31-41, 2008
- [7] L. G. Chai, and Y. N. Poh, "E-learning in Malaysia: Success Factors in Implementing E-learning Program". *International Journal of Teaching and Learning in Higher Education*. 20(2), pp. 237-246, 2009
- [8] C.H. Steel, "Why do University Students expert from teachers using an LMS?" *Proceeding ascilite Singapore* , pp. 942-950, 2006
- [9] T. Petrovic, and G. Kennedy, "How Often Do Students Use a Learning Management System in an On-Campus, Problem Based Learning Curriculum?", In: *Proceedings of ASCILITE 2005 – Balance, Fidelity, Mobility:*

Maintaining the Momentum? Australasian Society for  
Computers in Learning in Tertiary Education,  
Wollongong, 2005; pp. 535-538, 2005